

AMENDMENTS TO THE CLAIMS

Listing of Claims

The following listing of Claims replaces all previous listings of Claims.

1-15. (CANCELLED)

16. (Currently Amended) A method of designing a circuit for a programmable device, said method comprising:

- a) a user selecting a first module of a plurality of modules;
- b) said user placing said first module in a graphical user interface, wherein said graphical user interface comprises a plurality of resource images representing a layout of resources available in said programmable device in which to implement said modules, and wherein said placement is an allowable position overlaying at least one of said resource images and is based on characteristics of said first module and characteristics of said resources;
- c) said user repeating a) and b) to place multiple modules overlaying additional resource images in said graphical user interface, wherein said circuit comprises said placed modules; and
- d) said user selecting parameters for at least one of said placed modules.

17. (Original) The method of Claim 16, further comprising:

e) selecting a new position for said first module in said graphical user interface by causing said first module to be moved from a first resource image in said graphical user interface to a second resource image in said graphical user interface.

18. (Original) The method of Claim 16, further comprising:

e) selecting pin configurations for said placed modules by:

e1) causing a window to be displayed by selecting a region of a graphical user interface representing a target device in which to implement said circuit, said window providing selections for configuring a pin; and

e2) selecting a pin configuration provided in said window, wherein said pin is configured; and

e3) repeating for additional pins.

19. (Original) The method of Claim 16, further comprising:

e) configuring the interconnectivity between resource images in said graphical user interface, wherein interconnections are made between said placed modules.

20. (Original) The method of Claim 16, further comprising:

e) creating a source code program using an application program interface (API), wherein said API is for calling a routine to cause said first module to perform a predetermined function.

21. (New) A method of designing a circuit for a programmable device, said method comprising:

selecting a module to be used in said circuit;

requesting a valid placement for said module in a graphical user interface comprising resource images representing programmable resources in said programmable device, said valid placement specifying at least one of said resource images; and

selecting said valid placement to place said module in said graphical user interface.

22. (New) A method as recited in Claim 21, wherein said resource images comprise images corresponding to programmable analog blocks in said programmable device.

23. (New) A method as recited in Claim 21, wherein said resource images comprise images corresponding to programmable digital blocks in said programmable device.

24. (New) The method of Claim 21, further comprising:
requesting another valid position for said module in said graphical user interface.
25. (New) The method of Claim 21, further comprising:
selecting additional modules to be used in said circuit; and
requesting valid placements for said additional modules in said graphical user interface, said valid placements for said additional modules specifying at least one unique resource image for each additional module.
26. (New) The method of Claim 21, further comprising:
configuring interconnectivity between resource images in said graphical user interface to configure interconnectivity of said programmable resources.
27. (New) The method of Claim 21, further comprising:
selecting pin configurations for said module by:
causing a window to be displayed, said window providing selections for configuring an input/output pin; and
selecting a configuration provided in said window, wherein said input/output pin is configured.

28. (New) The method of Claim 21, further comprising:

selecting a parameter for said module by:

causing a window to be displayed for said module, said window

providing selections for setting said parameters; and

selecting a parameter from said window, wherein said

parameter is selected for said module.

29. (New) The method of Claim 21, further comprising:

creating a source code program using an application program

interface (API), wherein said API is for calling a routine to cause said

module to perform a predetermined function.

30. (New) A method of using a graphical user interface to facilitate implementing a design in a programmable device, said method comprising:

selecting a module for placement in said graphical user interface

comprising resource images representing programmable resources of said programmable device;

requesting valid placements for said module in said graphical user

interface, each of said valid placements specifying at least one of said resource images;

receiving respective indications of valid placements for said module in

said graphical user interface; and

selecting one of said valid placements to place said module in said graphical user interface.

31. (New) A method as recited in Claim 30 wherein said programmable resources comprise programmable analog blocks.

32. (New) A method as recited in Claim 30 wherein said programmable resources comprise programmable digital blocks.

33. (New) A method as recited in Claim 30 further comprising configuring parameters for said module using said graphical user interface.

34. (New) A method as recited in Claim 33 wherein said selecting one of said valid placements causes said parameters to be mapped to a register address of said programmable device.

35. (New) A method as recited in Claim 30 further comprising configuring pin inputs/outputs for said design using said graphical user interface.

36. (New) A method as recited in Claim 30 further comprising configuring interconnectivity of said programmable resources using said graphical user interface.